

GENERAL NOTES

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Dimensions refer to rough concrete surfaces, face of studs, face of concrete block, top of sheathing, or top of slab, unless otherwise indicated. The Contractor shall verify all dimensions prior to the start of construction. The Architect shall be notified of any discrepancies or inconsistencies.

All drawings are considered to be a part of the contract documents. The Contractor shall be responsible for the review and coordination of all drawings and specifications prior to the start of construction. Any discrepancies that occur shall be brought to the attention of the Architect prior to the start of construction so that a clarification can be issued. Any work performed in conflict with the contract documents or any code requirements shall be corrected by the Contractor at his own expense and at no expense to the owner or Architect.

Notes and details on the structural drawings shall take precedence over general notes and typical details. Where no details are given, construction shall be as shown for similar work.

All work shall conform to the minimum standards of the following codes:

2001 California Building Code, which comprises Title 24, Part 2 of the California Code of Regulations, as adopted by the California Building Standards Commission referred to here as "The California Building Code, 2001 Edition" or "the code", and any other regulating agencies which have authority over any portion of the work, including the State of California Division of Industrial Safety, and those additional codes and standards listed in these structural notes and specifications.

ASTM specifications on the structural drawings shall be of the latest revision.

Refer to the architectural drawings for the following:

- Dimensions not shown on the structural drawings.
- Size and location of all floor and roof openings, except as noted.
- Size and location of all interior and exterior non-bearing partitions.
- Size and location of all door and window openings, except as noted.
- Size and location of inserts for cladding or ornamentation.
- Size and location of all concrete curbs, equipment pads, pits, floor drains, slopes, depressed areas, change in level, chamfers, grooves, inserts, etc.
- Floor and roof finishes.

Refer to the mechanical, plumbing, and electrical drawings for the following:

- Pipe runs, sleeves, hangers, trenches, wall and slab openings, etc., except as noted.
- Electrical conduit runs, boxes, and outlets in walls and slabs.
- Concrete inserts for electrical, mechanical or plumbing fixtures.
- Size and location of machine or equipment bases or anchor bolts for motor mounts.

The contract structural drawings and specifications represent the finished structure. They do not indicate the method of construction. The Contractor shall provide all measures necessary to protect the structure during construction. Such measures shall include, but not be limited to, bracing and shoring for loads due to construction equipment, etc. Observation visits to the site by the Engineer shall not include inspection of the aforementioned items.

Contractor shall investigate the site, during clearing and earthwork operations, for filled excavations or buried structures, such as cesspools, cisterns, foundations, etc. If any such structures are found, the Engineer shall be notified immediately.

Openings, pockets, etc., larger than 6" shall not be placed in concrete slabs, decks, or walls, unless specifically detailed. Notify the Engineer when openings are made. Openings by others show openings, pockets, etc., larger than 6" not shown on the structural drawings, but which are located in structural members. For any further restrictions on openings in structural elements, see applicable sections below.

Construction material shall be spread out if placed on framed roof or floor. Load shall not exceed the design live load per square foot. Provide adequate shoring and/or bracing where the structure has not attained the design strength.

Specifications and detailing of all waterproofing and drainage items, although sometimes indicated on the structural drawings for general information purposes only, are solely the design responsibility of others.

Shop drawings, special inspections, and material sampling and testing, when required, are specified in their respective tables in the general notes and in the specifications.

DESIGN

Design conforms to the California Building Code, 2001 Edition.

Live loads: Roof (flat) 20 psf
Roof (sloped) 16 psf

Wind Analysis: Basic wind speed 70 mph
Exposure B

Seismic Analysis: Static lateral force procedure
Seismic Zone Factor: (Table 16-I) $Z = 0.4$
Soil Profile Type: (Table 16-J) $S = 0.4$
Occupancy Category: (Table 16-K) $I = 1.25$
Numerical Coefficient: (Table 16-L) $R = 1.0$
Amplification Factor: (Table 16-N) $Q_0 = 2.8$
Seismic Coefficients: (Table 16-O) $C_s = 0.44$
(Table 16-O) $C_v = 0.74$
Near-Source Factors: (Table 16-S) $N_1 = 1.0$
(Table 16-S) $N_2 = 1.0$
Seismic Source Type: (Table 16-U) $A = 2$

FOUNDATIONS

Foundations conform to the recommendations of the Geotechnical Report entitled: "Soil Engineering Study and Foundation Analysis, New Mountain View Senior Center Project 04-28a, 266 Escuela Avenue, Mountain View, California," prepared by Earth System Consultants Northern California, dated May 2004.

Maximum soil pressure = 2000 psf DL + LL + Lateral
= 2667 psf DL + LL + Lateral

Equivalent fluid pressure = 50 pcf: unrestrained walls

Passive earth pressure = 250 pcf

Coefficient of friction = 0.3

Refer to the Geotechnical Report for additional recommendations not listed below. All site grading, excavations, fills, and soil preparation shall conform to the Geotechnical Report and all work shall be done under the observation of the Geotechnical Engineer.

The Contractor shall provide for the design and installation of all cribbing, sheathing, and shoring required and shall be solely responsible for all excavation procedures including lagging, shoring, and the protection of adjacent property, structures, streets, and utilities in accordance with all national, state, and local safety ordinances.

Footings

Footings shall extend to such depth as to bear upon firm, undisturbed native soil or engineered fill. All abandoned footings, utilities, etc. shall be removed. All footings shall be founded at a depth at least 15' below the lowest adjacent grade. Footing depths shown on the structural drawings are minimum depths. Footings may be poured in neat excavated trenches.

Excavations for footings shall be observed by the Geotechnical Engineer prior to placing reinforcing and concrete. The Contractor shall notify the Geotechnical Engineer when the excavations are ready for observation.

Engineered Fill

Engineered fill below footings shall be compacted to 95% relative compaction as determined by the ASTM D1557 compaction test method and under the observation of the Geotechnical Engineer. Engineered fill shall have a minimum depth of 3'-0" beneath all footings and extend at least 5'-0" beyond all edges thereof.

Slabs On Grade

For the sub capillary break materials under concrete slabs on grade, refer to the Geotechnical Report. Provide a 15 mil vapor barrier complying with ASTM E 155-97 Class A with a MVR less than or equal to 0.008 per ASTM E96, placed in accordance with ASTM E 1845-98 over 4" rock course under slab on grade. Rock course shall be rolled to a smooth surface.

Backfill

All excavations shall be properly backfilled. Do not place backfill behind retaining walls before the concrete or grout has attained full design strength. The Contractor shall brace or protect all building and pit walls below grade from lateral loads until the retaining floors are completely in place and have attained full strength. The Contractor shall provide for the design, permits, and installation of such bracing.

Footings backfill and utility trench backfill within the building area shall be mechanically compacted in layers in accordance with the Geotechnical Report and observed by the Geotechnical Engineer or Inspector. Flooding will not be permitted.

Geotechnical Engineer Observation Letter

The Geotechnical Engineer shall prepare a letter for the building department giving an opinion regarding conformance of the footing excavations, engineered fill compaction, subgrade preparation, and backfilling with the requirements contained in the Geotechnical Report.

REINFORCING STEEL

Reinforcing Steel detailing, fabrication, and placement shall conform to the "Uniform Building Code", Chapter 19; the "Manual of Standard Practice of the Western Concrete Reinforcing Steel Institute", latest edition; and the "Building Code Requirements for Structural Concrete and Commentary", ACI 318-95; unless otherwise noted.

Standards: Reinforcing steel shall conform to the following standards:

Deformed Bars, #3 ASTM A615, Grade 40
Deformed Bars, #4 and larger ASTM A615, Grade 60
Welded reinforcement, when specified by Engineer ASTM A706

Placing: All steel reinforcement shall be securely tied in place so as to maintain their exact position before and during the placement of concrete. Reinforcing steel shall be securely tied in place with #16 annealed iron wire. Bars in beams and slabs shall be supported on well-cured concrete blocks or approved plastic tipped metal chairs, as specified by CSI Manual of Standard Practice, M5-1. Wire fabric in slabs shall be securely fastened to supporting devices to maintain their position during concrete placement.

Lap bars 48 diameters, 24" minimum, unless otherwise noted.

Mechanical splices: Where noted on plans, provide threaded couplers capable of developing 100% of the specified yield strength of the reinforcing steel. Couplers shall be Type 2, as per UBC Section 1921.2.6.1.2. Threaded couplers shall be as manufactured by Erico Company, or approved equal with a current ICB0 approval report.

Welding: Where welding of reinforcing bars is approved by the Engineer, it shall be done by AWS certified welders using E70XX or approved electrodes. Welding procedures shall conform to the requirements of the "Structural Welding Code - Reinforcing Steel", AWS-D1.4, latest edition.

Clear distances, steel to forms, unless noted otherwise:

Slabs not exposed to weather, joists, interior wall surfaces 3/4"
Exterior wall surfaces, slabs exposed to weather 1-1/2"
Clear distance between bars 2-1/2"
Slabs on rolled grade 1-1/2"
Formed surfaces in contact with earth 3"
Uniformed surfaces in contact with earth 3"

Shop drawings shall be submitted to the Architect for review prior to fabrication. Shop drawings shall include elevations of all beams and columns showing bar and lap locations. Fabrication and installation shall conform to the requirements of the "Structural Steel Fabrication and Installation Manual", latest edition. Submit all certificates for reinforcing steel prior to rebar placement.

CONCRETE WORK

Forms shall be properly constructed conforming to concrete surfaces as shown on the drawings, sufficiently tight to prevent leakage, sufficiently strong, and braced to maintain their shape and alignment until no longer needed to support the concrete. Forms for exposed concrete shall be plywood, using sheets as large as possible, with all joints tightly fitted and blocked, and shall produce a finished concrete surface which is smooth, true, and free from blemishes according to accepted standards for architectural concrete.

Refer to architectural, electrical, and mechanical drawings for details at door and window openings, floor type hinges, etc., and for location of sleeves, pipes, and other embedded items. Openings through walls and slabs not shown on the structural drawings which would interrupt reinforcing bars shall not be made without approval of the Architect.

Debris should be entirely removed from forms prior to concrete placement.

Horizontal construction joints shall be located as shown on the structural drawings, and the hardened concrete surfaces shall be cleaned by sandblasting and other approved means to expose firmly embedded aggregates prior to pouring additional concrete in contact with these surfaces. Vertical construction joints through beams or slabs shall be located only as shown on structural drawings.

Forms and shoring shall not be removed until the concrete has attained sufficient strength to withstand all loads to be imposed without excessive stress, creep, or deflection. See specifications for shoring requirements.

Concrete shall be ready mixed conforming to ASTM C94. Cement shall be Portland Cement Type II, conforming to ASTM C150. All hardrock (H.R.) concrete used in suspended slabs and slabs on grade shall be designed for low shrinkage (L.S.). Acceptable coarse aggregates for low shrinkage concrete include Kaiser-Clayton, Granite Rock or Limestone. Alternative aggregates may be submitted provided they provide a concrete mix with a shrinkage limitation of 0.04% after 28 days of drying. Submit test data to the Architect for review.

Use maximum size aggregate as noted below. Use 3/8" maximum aggregate where necessary for proper placing, such as in thin or congested sections, etc. Superplasticizers may be used to improve workability in thin or congested sections. Incorporate superplasticizers into concrete mix designs.

Contractor shall submit for review of the Architect the concrete mixes proposed for use, designed by the concrete supplier and reviewed by an approved testing laboratory.

Concrete shall have the following characteristics:

Concrete Strength Maximum Minimum Water Content
Location Aggregate @ 28 Days Slump Content Ratio
Footings 1-1/2" H.R. 3000 psi ... 3-1/2" ... 5 Sacks 0.60
Slab on grade 3/4" H.R.-L.S. 3000 psi ... 3-1/2" ... 5 Sacks 0.45

* Slump shall be the minimum consistent with proper placing.

Pipes other than electrical conduits shall not be embedded in structural concrete except where specifically approved by the Engineer. Electrical conduits embedded in concrete shall not exceed 1/4" O.D., without approval of the Engineer.

Conduit or sleeves, when embedded in concrete, shall be spaced with one conduit or sleeve diameter (larger conduit/sleeve) clear between adjacent conduits, sleeves, or rebar, or 1 inch, whichever is greater. Conduit or sleeves can be tied to rebar when oriented perpendicular to them, provided the location of the rebar is not affected by the conduit or sleeves. Conduit or sleeves without clearance noted above shall be submitted to the architect for review prior to installation. Added trim reinforcement will be required where clearances cannot be met, such as electric panel rooms.

The Contractor shall inform the Architect at least 3 days prior to pouring any structural concrete so that the Architect may have the opportunity of reviewing the work prior to concrete placement.

All concrete except slabs on grade 6" thick or less shall be mechanically vibrated so as to completely fill the forms without causing undue segregation.

Four test cylinders from each 150 yards, or fraction thereof, poured in any one day, shall be secured and tested by an independent testing agency; one to be tested at 7 days, two at 28 days, and the fourth held in reserve. For post-tensioned concrete secure five cylinders per 150 yards, or fraction thereof, poured in any one day, two sets minimum. Test one at 4 days, two at 28 days, and hold two in reserve.

The Contractor shall remove and replace any concrete which fails to attain specified strength in 28 days if so directed by the Architect. Any defects in the hardened concrete shall be satisfactorily repaired or the hardened concrete shall be replaced.

MASONRY

Specifications:

Concrete Block: ASTM C90, Grade N Type I Units made with medium weight aggregates, which shall provide a full assembly strength according to specs.
Reinforcing: ASTM A615, Grade 60
Grout: 2000 psi minimum at 28 days
Mortar: Type S or 2000 psi minimum at 28 days

Use all double open end bond beam units, except closed one end at corners, openings, and ends of walls. Provide a minimum of 1/2" clear between the main reinforcing and the masonry units. Lap all splices 40 diameters or 2'-0" minimum. Place extra #4 bar at top of walls, at all ends and corners, and around all sides of openings, unless noted otherwise, and extend 40 diameters (2'-0" minimum) beyond the edges of the openings. When height of grout pour exceeds 4'-0", provide cleanouts at the bottom of the wall at all cells containing vertical reinforcing. All grout shall be mechanically vibrated by electric vibrators. Fill all cells solid with grout.

Refer to the testing requirements under the "Special Inspection" section.

STRUCTURAL STEEL AND MISCELLANEOUS IRON

Structural Steel and Miscellaneous Iron shall be fabricated and erected according to the American Institute of Steel Construction's "Specifications for Design, Fabrication, and Erection of Structural Steel for Buildings", latest edition and the "Code for Standard Practice for Steel Buildings and Bridges", latest edition.

All steel wide flange shapes shall conform to ASTM A572 (Fy = 50 ksi). Unless otherwise noted, all other steel plates and shapes shall conform to ASTM A36. Steel Pipe shall conform to ASTM A53 Grade B (Fy = 35 ksi) or ASTM A501 (Fy = 38 ksi). Structural Tubing shall conform to ASTM A500 Grade B. Use bars in lieu of plates wherever practical or called for on the structural drawings.

All steel to steel bolted connections shall be bolted with high strength bolts according to ASTM A325 and ASTM A490, as approved by the Research Council of Riweted and Bolted Structural Joints. Other bolted connections shall be bolted with unfinished bolts bolts according to ASTM A307. Anchor bolts shall conform to ASTM F1554 GR 36.

All welded connections shall be welded according to the "Structural Welding Code - Steel", AWS-D1.1, latest edition. Welding shall be performed by welders certified for the welds to be made. All welding should be done with E70XX electrodes, unless noted otherwise. Refer to the specifications for the welding process to be used.

The weld lengths called for on the structural drawings are the net effective length required. Where fillet weld symbol is given without indication of size, use the minimum size weld as specified in AISI Manual of Steel Construction 9th Edition, Section 1.17.2. All structural steel surfaces that are encased in concrete, masonry, or spray on fireproofing, or are encased by building finish, shall be left unpeinted.

Galvanize according to ASTM A123, hot dip process.

Additional miscellaneous metal items such as embeds, railings, and supports for interior finishes may be shown on drawings prepared by others, see architectural drawings.

Shop drawings shall be submitted to the Architect for review prior to fabrication.

The testing agency shall send copies of all structural testing and inspection reports directly to the Engineer.

LIGHT METAL STRUCTURAL FRAMING

Light metal structural framing shall be fabricated and erected according to manufacturer's recommendations. All structural properties shall be computed in accordance with the AISI "Specifications for the Design of Cold Formed Steel Structural Members", latest edition. Unless otherwise noted, steel shall conform to the following specifications:

- Studs, runners, and joists, painted, 18 gage and heavier: ASTM A1011 Grade 50, modified to a minimum yield point of 50 ksi.
- Studs, runners, and joists, galvanized, 16 gage and heavier: ASTM A653 Grade 50, modified to a minimum yield point of 50 ksi.
- Studs, runners, and joists, painted, 18 gage and lighter: ASTM A1008 Grade 33, modified to a minimum yield point of 33 ksi.
- Studs, runners, and joists, galvanized, 18 gage and lighter: ASTM A653 Grade 33, minimum 33 ksi yield.

For minimum stud section properties, refer to the structural details.

Metal stud and metal joist bridging (V or solid) shall be provided and installed according to the manufacturer's recommendations. Align at least one metal stud under every metal joist, beam, or header.

Welding of light metal shall be with fillet welds equal in thickness to the thinner of the two sections being joined. All welded connections shall be welded as shown on the structural drawings. Double vertical studs shall be stitch welded together on both flanges with 1/8" groove welds x 1" long at 12" on center.

Shop drawings shall be submitted to the Architect for review prior to erection.

The Testing Laboratory shall send copies of all testing reports directly to the appropriate Building Inspection Department.

CARPENTRY

Framing lumber shall meet the following minimum standard except where otherwise noted:

USE	SPECIES	GRADE	AUTHORITY
Plywood	A.P.A.	CD Ext. or Grade Marked	UBC Standards CD Int. w/ Exterior Glue Sec. 23-2

Horizontal roof framing lumber:

4 x 4 and smaller	D.F.	No. 2	WCLB & WPPA
2 x roof joists and rafters	D.F.	No. 2	WCLB & WPPA
2 x floor joists	D.F.	No. 2	WCLB & WPPA
4 x headers and beams	D.F.	No. 2	WCLB & WPPA
6 x 6 and larger	D.F.	No. 1	WCLB & WPPA

All other framing	D.F.	Standard & Better	WCLB & WPPA
lumber, u.n.o.			

Minimum framing nailing shall conform to UBC Table 23-1B-1. All nails shall be common wire nails. Predrill nail holes to 70% of nail shank diameter where nailing tends to split wood.

Approved metal type bridging shall be used only for roofs.

Joist hangers and other metal framing accessories are referred to on plans by particular type as manufactured by Simpson Company, San Leandro, California. Accessories of other manufacture with equivalent load carrying characteristics may be used.

Fire stopping, backing for interior finishes, nonbearing walls, and other non-structural framing are not necessarily shown on structural drawings.

Plywood or Oriented Strand Board (OSB) Sheathing:

Roof sheathing shall be 1/2" Ident Index 32/16 Plywood only.

Wall sheathing shall be 1/2" Ident Index 16/0 Plywood or OSB

Shear Wall Sheathing shall be Ident Index 16/0 Plywood Struct 1

Sheathing Installation - Plywood or OSB roof and floor sheathing shall be laid with the grain of the outer plies perpendicular to the framing members and end joints shall be staggered. Wall sheathing shall be applied vertically.

Unless otherwise noted, plywood or OSB sheathing nails shall be common. Equivalent pneumatic driven nails or staples may be used if fastener manufacturer has received ICB0 approval according to Research Recommendations Report ER-2843. Equivalent pneumatic driven nails or staples may be used if fastener manufacturer has received ICB0 approval according to Research Recommendations Report #2403 and approval of City and County Building Department.

Use of machine nailing is subject to a satisfactory jobsite demonstration for each project and the approval by the project architect or structural engineer and the office of the state architect. The approval is subject to continued satisfactory performance. Machine nailing will not be approved in 5/16" plywood or OSB sheathing. If nailheads penetrate the outer ply more than normal for a hand hammer or if minimum allowable edge distances are not maintained, the performance will be deemed unsatisfactory.

Roof Sheathing
Block all unsupported edges of sheathing where shown on plans. Edge blocking shall be 1-1/8" plywood or OSB minimum.

Typical nailing shall be 16d at 6" o.c. at all supported edges and over shear walls, and 16d at 12" o.c. at all intermediate supports, unless otherwise noted, see plans.

Wall Sheathing - Block all unsupported edges of sheathing. Walls to be sheathed with plywood or OSB are designated thus ----- on plans.
Typical nailing at wood stud walls shall be 8d at 6" o.c. at all edges, and 8d at 12" o.c. at all intermediate supports, unless otherwise noted, see plans. Typical fastening at light gage metal stud walls shall be No. 8 by 1" flat head screws with a minimum head diameter of 0.282" at 6" o.c. at all edges, and at 12" o.c. at all intermediate supports, unless otherwise noted, see plans.

Plywood sheathed walls, denoted with a \odot symbol, are designated as shear walls and shall be nailed as per the Shear Wall Nailing Schedule on 2/51.3.

GLUED LAMINATED BEAMS

Glued laminated members shall be manufactured according to the AITC 117 "The Standard Specifications for Structural Glued Laminated Douglas Fir Timber", latest edition. Adhesive shall be for wet condition of service and an AITC Certificate of Inspection is required.

Glued laminated beams shall provide stress values that meet or exceed the following:

Bending Fb (Button Fibers)	2400 psi
Bending Fb (Top Fibers) - Single Span	1200 psi
Bending Fb (Top Fibers) - Multiple Spans or Cantilevers	2400 psi
Horizontal Shear Fv	165 psi
(For 3 1/8" Glulam ONLY, Horizontal Shear Fv may be	95 psi)
Compression Parallel to Grain	1800 psi
Compression Perpendicular to Grain	450 psi

Provide cambers as noted on the drawings.

Appearance Grade Shall Be: Industrial, when concealed from view. Architectural, when exposed to view.

WOOD 'I' JOISTS (TJI)

Wood 'I' joists (TJI) shall be as manufactured by Trus Joist McMillan. Joists shall be fabricated using structural grade plywood or oriented strand board for web material, MICRO-LAM lumber or stress-rated lumber for flange material, and utilizing waterproof glues. Design shall be in accordance with applicable ICB0 Research Recommendations.

Double roof joists at all hanging mechanical units. See plans for locations. Nail doubled joists with 16d at 12" o.c., staggered.

Provide the following blocking as a minimum, unless shown otherwise:
2" x full depth solid blocking between joists over support.
2" x full depth solid blocking between joists over and below partition walls.

Provide full depth TJI blocking for the following conditions, unless shown otherwise:
Between joists over support.
Bridging shall be full depth TJI blocking, installed as follows:
Roof joists: 12" U.O.C. maximum, not more than 12"-0" from support.

Shop drawings, showing critical dimensions for placement and design loads, shall be submitted to the Architect for review prior to fabrication. Shop drawings and calculations shall be signed by a Civil or Structural Engineer licensed in the state of California.

Joists stored prior to erection shall be stored in a vertical position and protected from the weather. Handle joists with care to avoid damage. Erection bracing shall be provided to keep the joists straight and plumb and to assure adequate lateral support for the joists until the sheathing has been attached. After installation and bracing to enclosing the joists, the contractor shall provide the Architect with an opportunity to observe the work.

SHOP DRAWING SUBMITTALS

When indicated with a "✓", the following items shall have either a) shop drawings or b) certificates of conformance or c) shop drawings, calculations, and details submitted to the architect for review and approval prior to fabrication. When shop drawings, calculations, and details are required, submittals (drawings and calculations) must be signed and stamped by a Civil or Structural Engineer registered in the State of California. For information on the content of the submittals, refer to the project specifications and the specific general notes sections. The Engineer will review two prints and one reproducible copy of each submittal.

Item	Shop Drawings	Certif-icate	Shop Dwg., Calc., and Details	Remarks
Concrete, reinforcing	✓			
Concrete, mixes		✓		
Concrete, cement		✓		
Concrete, fine aggregates		✓		
Concrete, coarse aggregates		✓		
Concrete, admixtures		✓		
Structural steel	✓			
Glued-laminated beams	✓			AITC Certificate
Wood 'I' joists	✓			
Metal stud framing, exterior walls	✓			

SPECIAL INSPECTION

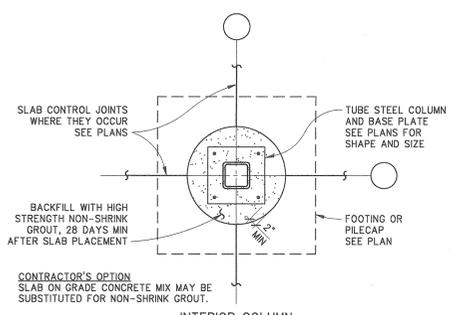
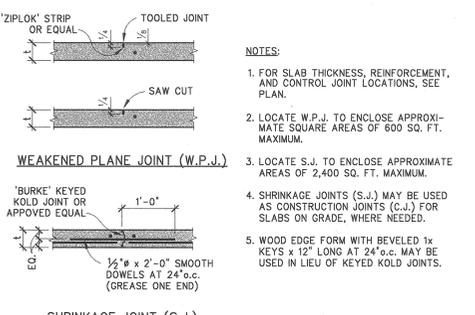
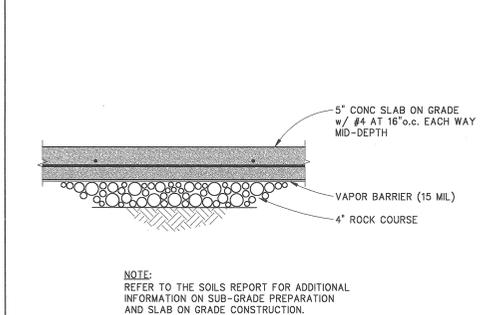
When indicated with a "✓", the following items shall be inspected in accordance with UBC Section 1701.5 by a certified special inspector from an established testing agency. All inspection shall be continuous, unless otherwise noted. For material sampling and testing requirements, refer to the material sampling and testing section, the project specifications, and the specific general notes sections. The testing agency shall send copies of all structural testing and inspection reports directly to the Architect, Engineer, and Building Department. Any materials which fail to meet the project specifications shall immediately be brought to the attention of the Architect.

Item	Required	Remarks
Grading, excavations, and fill	✓	By Geotechnical Engineer
Concrete, rebar placement	✓	Inspect final placement
Concrete, anchor bolts and inserts	✓	

STANDARD HOOK DETAILS

Bar Sizes	Dimensions of standard 180 degree hooks, all grades				Dimensions of standard 90 degree hooks, all grades			
	A or G	J	D	A or G	D	A or G	D	
#3	5"	3"	2 1/2"	6"	2 1/2"	6"	2 1/2"	
#4	6"	4"	3"	8"	3"	8"	3"	
#5	7"	5"	3 3/4"	10"	3 3/4"	10"	3 3/4"	
#6	8"	6"	4 1/2"	11"	4 1/2"	11"	4 1/2"	
#7	10"	7"	5 1/2"	13"	5 1/2"	13"	5 1/2"	
#8	11"	8"	6"	14"	6"	14"	6"	
#9	11"	8"	6"	14"	6"	14"	6"	
#10	11"	8"	6"	14"	6"	14"	6"	
#11	11"	8"	6"	14"	6"	14"	6"	
#14	2'-3"	1'-9 1/2"	18 1/2"	2'-7"	18 1/2"	2'-3"	18 1/2"	
#18	3'-0"	2'-4 1/2"	24"	3'-5"	24"	3'-0"	24"	

D = Bend diameter



18 APRIL 2005
DATE SIGNED

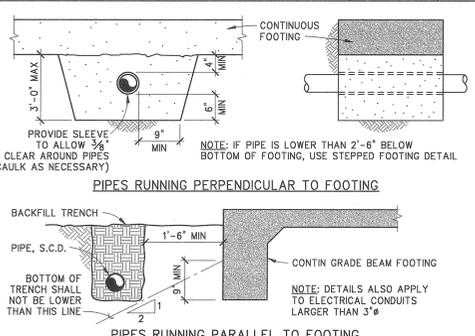
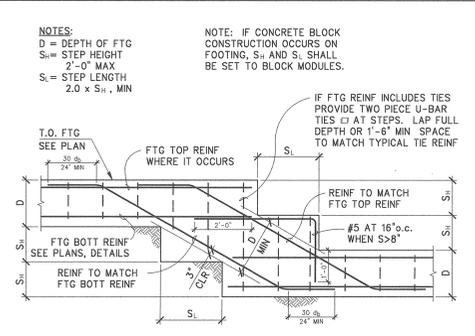
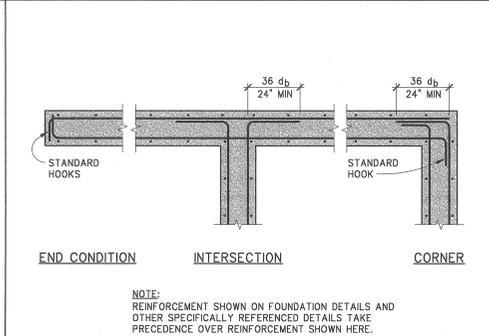
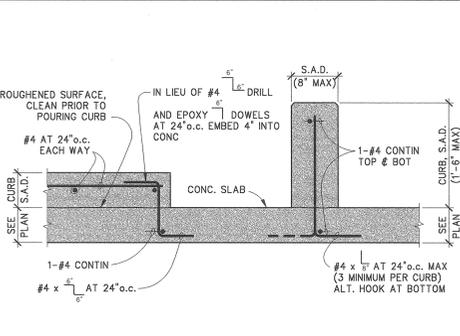
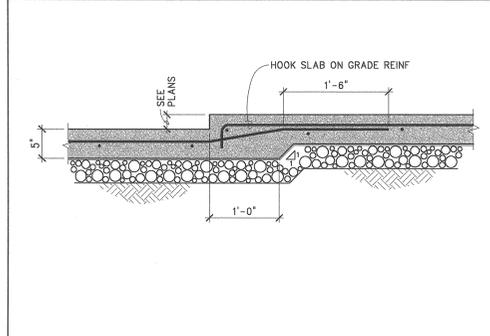
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CONCRETE REINF HOOKS SCALE: NONE 1

SLAB ON GRADE SCALE: NONE 2

S.O.G. CONTROL JOINTS SCALE: NONE 3

SLAB BLOCKOUT SCALE: NONE 4



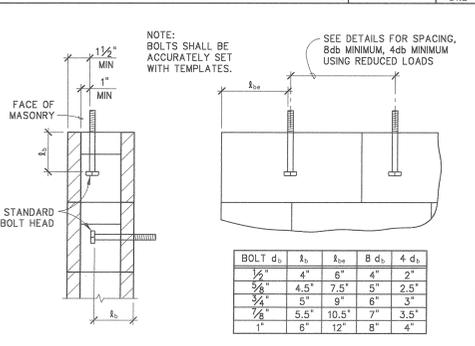
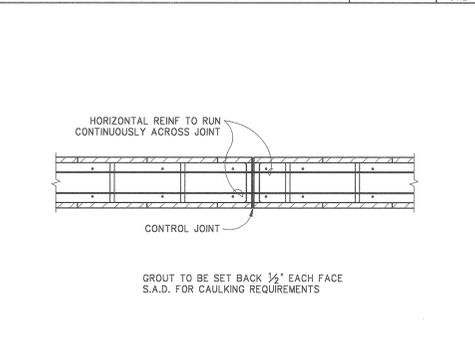
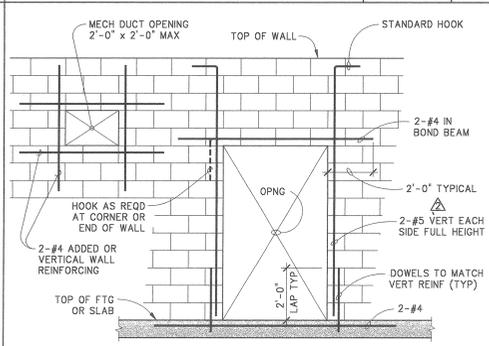
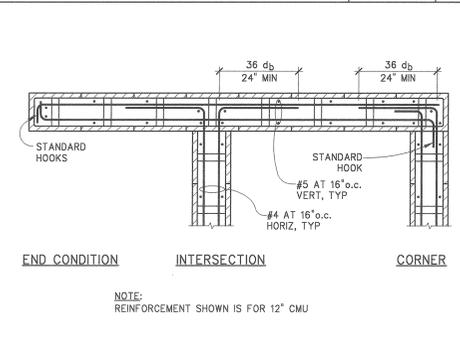
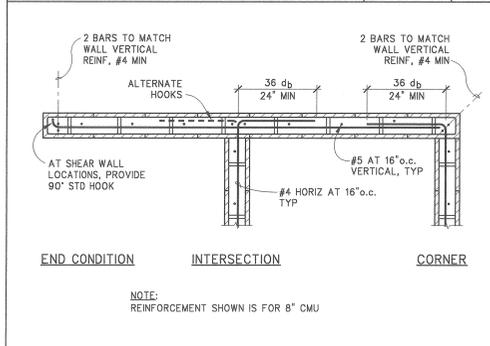
SECTION AT SLAB DEPRESSION SCALE: 1" = 1'-0" 5

CURBS ON SLAB SCALE: NONE 6

GRADE BEAM FOOTING REINF SCALE: NONE 7

STEPPED FOOTING DETAIL SCALE: NONE 8

PIPE TRENCH AT FOOTING SCALE: NONE 9



SINGLE LAYER WALL REINF SCALE: NONE 10

DOUBLE LAYER WALL REINF SCALE: NONE 11

CMU WALL OPENING SCALE: NONE 12

CMU CONTROL JOINT SCALE: 3/4" = 1'-0" 13

BOLTS IN CMU WALL SCALE: NONE 14

MOUNTAIN VIEW SENIOR CENTER

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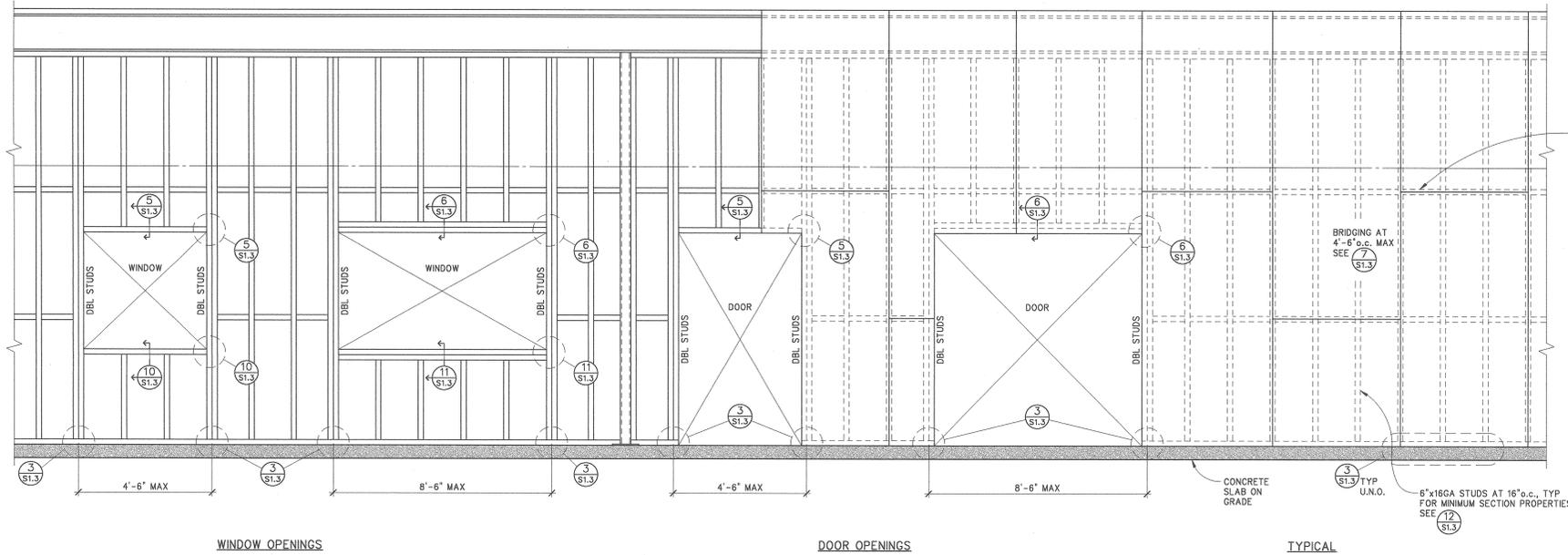
DATE: APRIL 18, 2005

REVISIONS:

CONSTRUCTION SET

SHEET TITLE:
TYPICAL DETAILS - CONCRETE AND MASONRY

DRAWN BY: FC SHEET
CHECKED BY: TLH S1.2
JOB NO: K103044



TYPE	PLYWOOD SHEATHING	FASTENER SPACING AT PANEL EDGES	FASTENER SPACING AT PANEL EDGE TO BOTTOM TRACK	BOTTOM TRACK TO CONCRETE FASTENER SPACING	JOISTS OR BLOCKS TO TOP PLATE	ALLOW SHEAR
STRUCT 1	#8 FLAT HEAD SCREWS				SIMPSON A35 ANCHORS	LB/FT
A	1/2" THICK	6"	20"	8"	AT 16" o.c.	312
B	1/2" THICK	4"	14"	6"	AT 12" o.c.	396
C	1/2" THICK	3"	10"	4"	AT 6" o.c.	586
D	1/2" THICK	2"	8"	4"	AT 6" o.c.	650



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- NOTE:**
- FASTENERS TO ATTACH PLYWOOD TO LIGHT GAGE FRAMING MEMBERS SHALL BE A MINIMUM NO. 8 SCREWS BY 1" FLAT HEAD w/ A MINIMUM HEAD DIAMETER OF 0.292"
 - FASTENERS USED TO ATTACH PLYWOOD TO STRUCTURAL STEEL (I.E. HSS COLUMNS) SHALL BE A MINIMUM 0.144" w/ 1 1/2" ET&F PNEUMATIC FASTENERS (ICBO #4144) OR APPROVED EQUAL.
 - SCREWS IN THE FIELD OF THE PANEL SHALL BE INSTALLED 12 INCHES ON CENTER.
 - TOP TRACK TO BOTTOM WF BEAM CONNECTION TO BE 0.145" HILTI X-EDNI (ICBO #2388) OR APPROVED EQUAL.
 - CONNECTION BETWEEN TOP AND BOTTOM TRACK TO METAL STUD SHALL BE (1) #10 S.M.S. EACH FLANGE EACH SIDE, TYPICAL.
 - CONNECTION BETWEEN BOTTOM TRACK TO CONCRETE SHALL BE 0.145" HILTI X-DNI FASTENERS WITH 1" MINIMUM EMBED (ICBO #2388) OR APPROVED EQUAL.
 - METAL STUDS FOR ALL SHEARWALLS SHALL BE 6"x18GA FOR MINIMUM SECTION PROPERTIES, SEE (12).
 - FOR INTERIOR SHEAR WALL CONNECTIONS TO ROOF DIAPHRAGM, SEE (14) & (15).

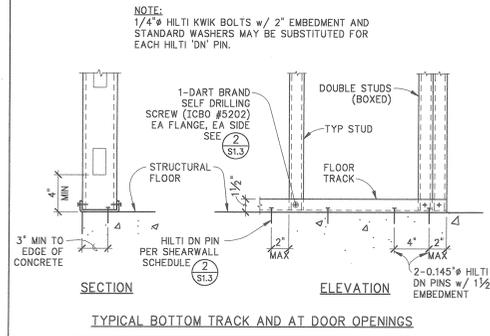
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EXTERIOR AND SHEAR WALL METAL STUD WALL FRAMING ELEVATION

SCALE: NONE 1
KPPF K610 S1.3

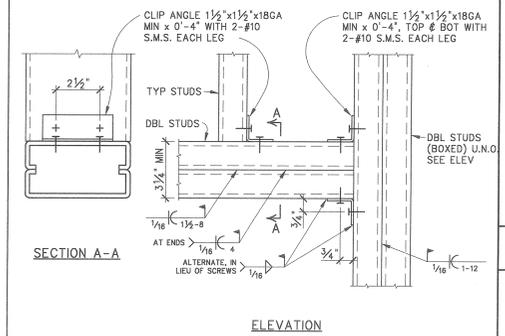
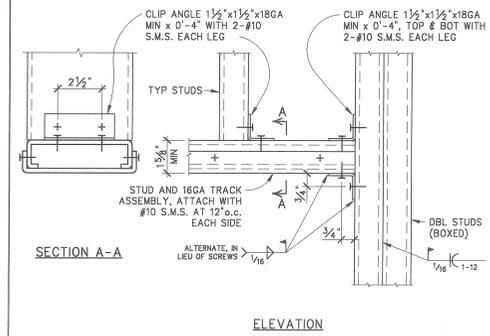
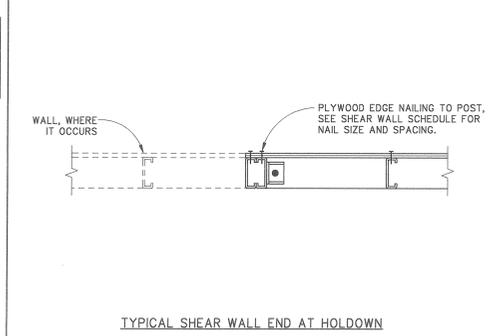
SHEARWALL SCHEDULE

SCALE: NONE 2
KPPF K000 S1.3



HOLDOWN SCHEDULE

MODEL NO.	ANCHOR DIAMETER	NUMBER OF #10 S.M.S. REQUIRED	ALLOWABLE TENSION (LB)
S/HT14	5/8"	14	4385
S/HD8	7/8"	24	8460
S/HD10	7/8"	30	9665
S/HD15	1"	48	12200



BOTTOM TRACK

SCALE: NONE 3
KPPF K610 S1.3

DETAIL

SCALE: 3/4" = 1'-0" 4
KPPF K800 S1.3

SECTION

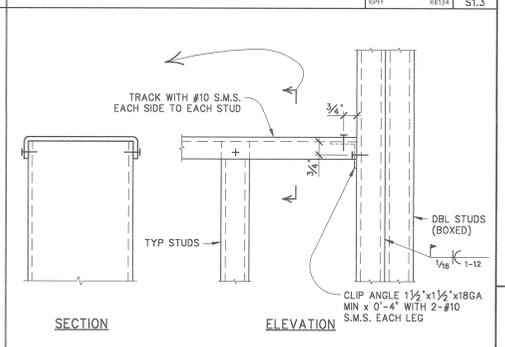
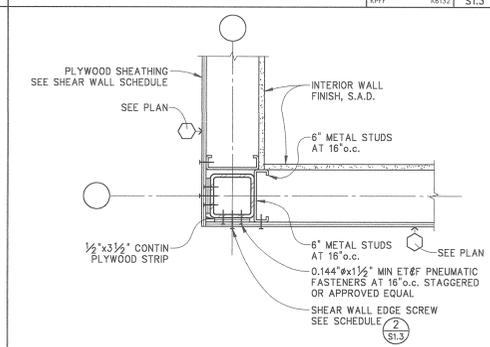
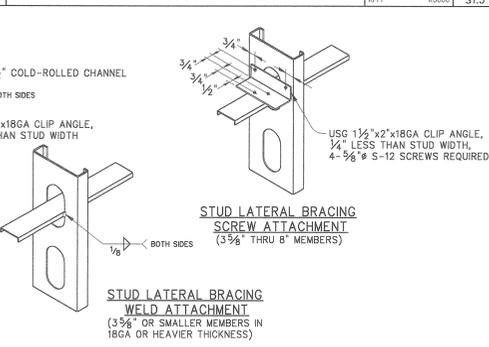
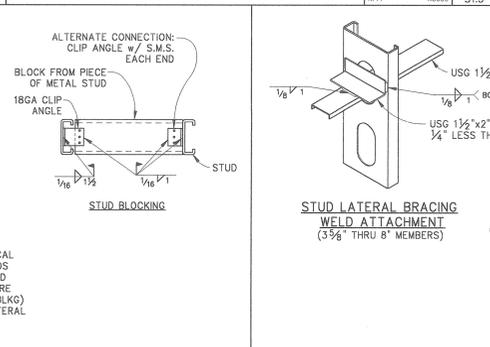
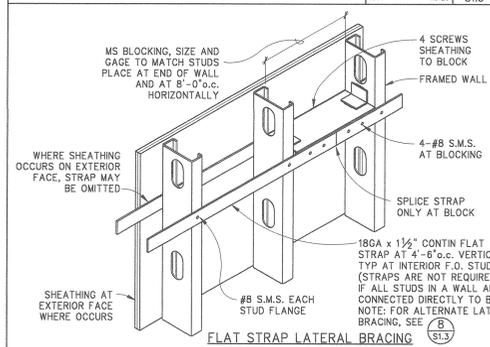
SCALE: 1 1/2" = 1'-0" 4A
KPPF K000 S1.3

LINTEL DETAIL, 4'-6" MAX

SCALE: NONE 5
KPPF K632 S1.3

LINTEL DETAIL, 8'-6" MAX

SCALE: NONE 6
KPPF K6134 S1.3



DETAIL

SCALE: NONE 7
KPPF K000 S1.3

DETAIL

SCALE: NONE 8
KPPF K000 S1.3

TYPICAL SHEARWALL END AT HSS POST

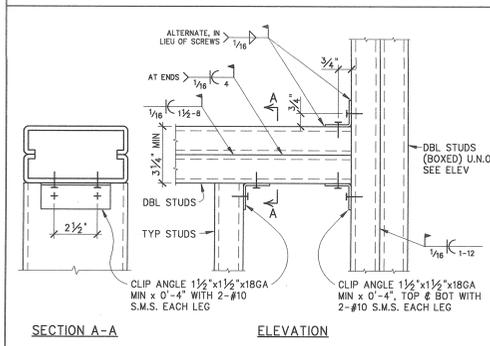
SCALE: 1 1/2" = 1'-0" 9
KPPF K000 S1.3

SILL DETAIL, 4'-6" MAX

SCALE: NONE 10
KPPF K0126 S1.3

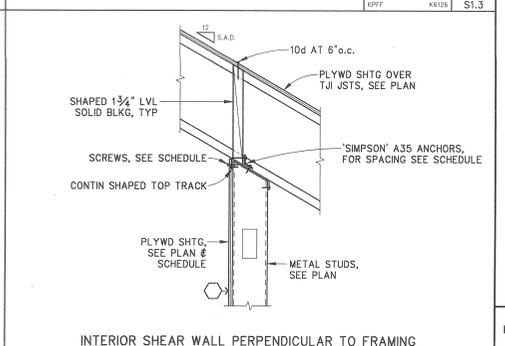
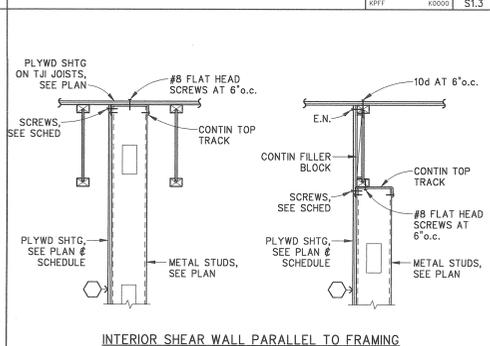
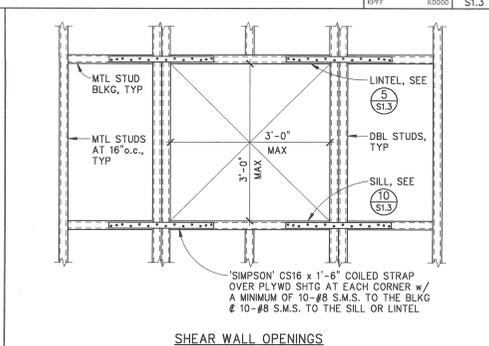
SILL DETAIL, 8'-6" MAX

SCALE: NONE 11
KPPF K0128 S1.3



STRUCTURAL METAL STUD PROPERTIES

MARK	WIDTH In	GAGE In	FLANGE In	LIP In	A(gross) In 2	Sxx In 3	Ixx In 4	Rx In	Iyy In 4	Ry In
800S182-54	8	16	1-5/8	0.500	0.556	0.953	2.860	2.267	0.180	0.570
800S150-54	6	16	1-1/2	0	0.509	0.843	2.611	2.266	0.091	0.422
800S182-54	8	16	1-5/8	0.500	0.670	1.397	5.736	2.927	0.194	0.539
800S150-54	6	16	1-1/2	0	0.622	0.963	4.835	2.898	0.096	0.393



SILL DETAIL, 8'-6" MAX

SCALE: NONE 11
KPPF K0128 S1.3

STRUCTURAL METAL STUD PROPERTIES

SCALE: NONE 12
KPPF K610 S1.3

DETAIL

SCALE: NONE 13
KPPF K6064 S1.3

SECTION

SCALE: 1" = 1'-0" 14
KPPF K000 S1.3

SECTION

SCALE: 1" = 1'-0" 15
KPPF K000 S1.3

DATE: APRIL 18, 2005

REVISIONS:

CONSTRUCTION SET

TYPICAL DETAILS - LIGHT METAL WALL FRAMING

DRAWN BY: FC
CHECKED BY: TLH
JOB NO: K103044
SHEET S1.3



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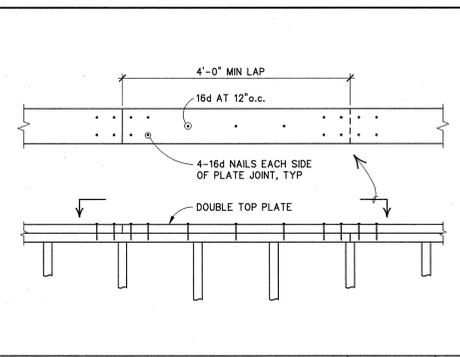
DATE: APRIL 18, 2005

REVISIONS:

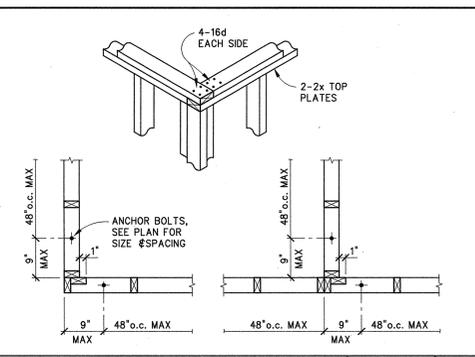
CONSTRUCTION SET

SHEET TITLE:
TYPICAL DETAILS - WOOD

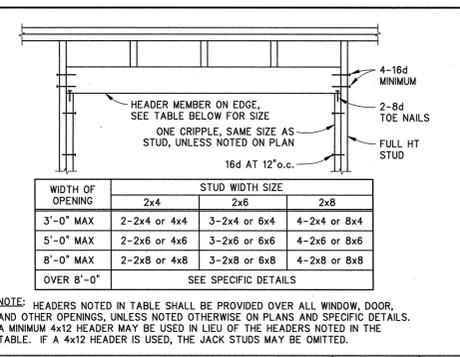
DRAWN BY: FC
CHECKED BY: TLH
JOB NO: K103044
SHEET S1.4



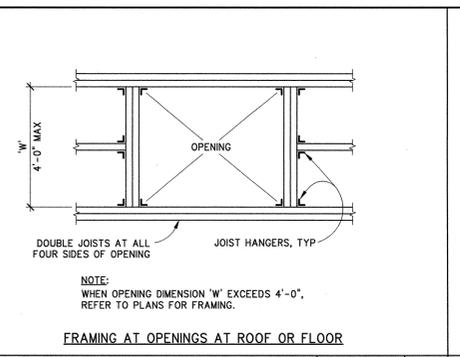
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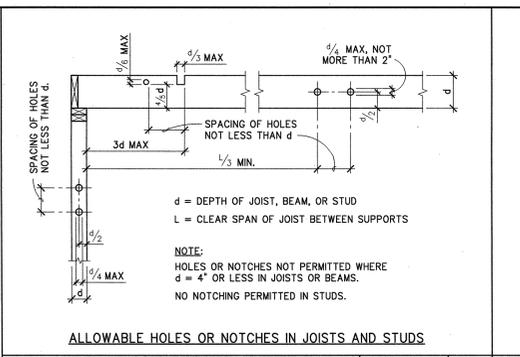
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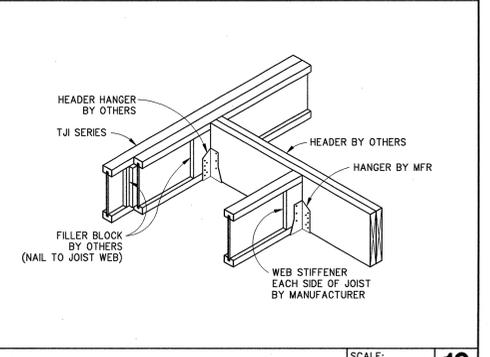
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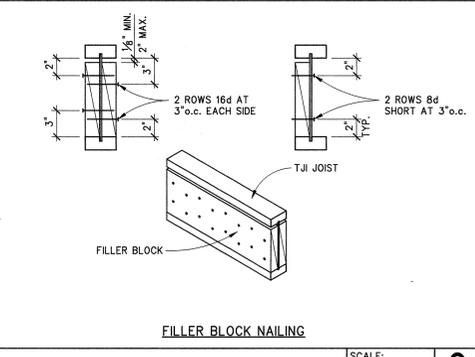
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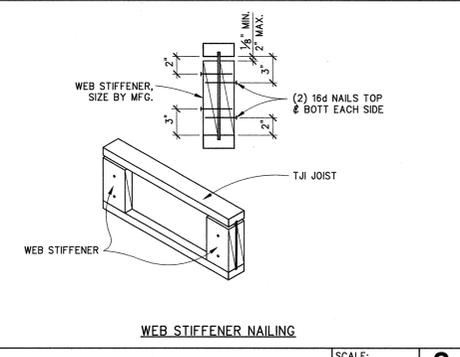
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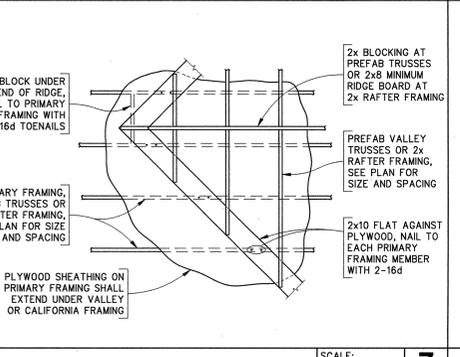
SCALE: 3/4" = 1'-0"
K997 K9424 S1.4



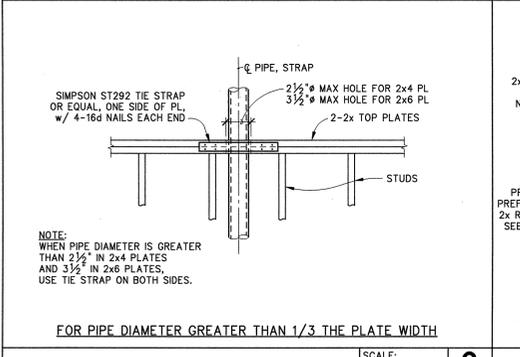
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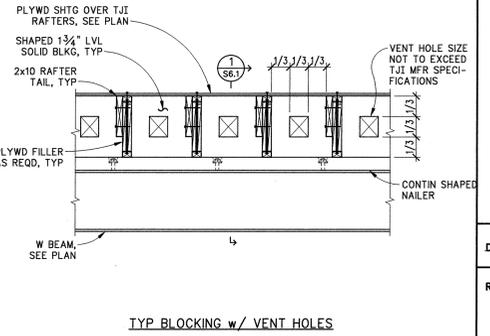
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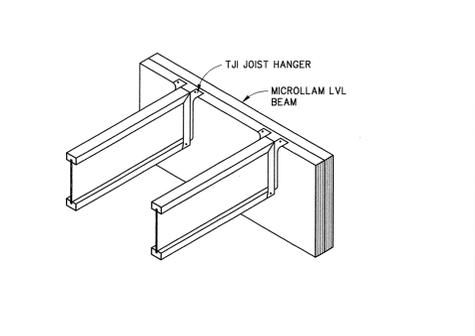
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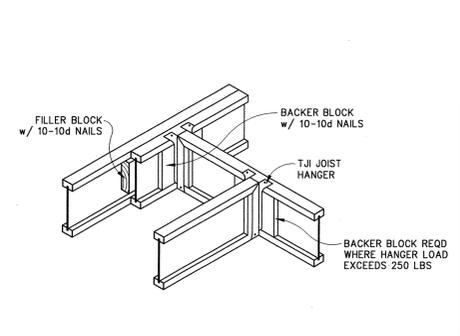
SCALE: NONE
K997 K8030 S1.4



SCALE: 3/4" = 1'-0"
K997 K8000 S1.4



SCALE: NO SCALE
K997 K9972 S1.4



SCALE: NO SCALE
K997 K9971 S1.4

NOTES:
HOLE SIZES: THE SIZES GIVEN IN THE TABLE ARE HOLE SIZES, NOT DUCT SIZES.
ROUND HOLES: FOR SIMPLE SPANS AND UNIFORM LOADS, USE THE TABLE TO DETERMINE THE HOLE SIZE.
SQUARE HOLES: SQUARE HOLE SIZE IS DETERMINED BY MULTIPLYING THE MAX. ROUND HOLE DIAMETER BY A FACTOR OF 0.8.
RECTANGULAR HOLES: MULTIPLY THE MAX. ROUND HOLE DIAMETER BY A FACTOR OF 0.8. THIS REPRESENTS THE LONGEST SIDE OF THE RECTANGLE.
MULTIPLE HOLES: WHERE MORE THAN ONE HOLE IS DESIRED, THE AMOUNT OF WOOD BETWEEN HOLES MUST BE EQUAL OR EXCEED TWICE THE DIAMETER OF THE LARGEST HOLE OR TWICE THE SIZE OF THE LARGEST SQUARE HOLE.
CANTILEVERS AND CONTINUOUS SPANS: FOR UNIFORMLY LOADED CANTILEVERS AND CONTINUOUS TJI JOIST SERIES, THE HOLES MUST BE LOCATED ONE INCH FURTHER FROM THE SUPPORT FOR EACH FOOT OF CLEAR SPAN IN ADDITION TO THE VALUES INDICATED IN THE TABLE.
NOTE: EXCEPTIONS TO THESE RULES MAY BE POSSIBLE THROUGH SPECIAL INQUIRY.

INSTRUCTIONS:
1. KNOWING JOIST DEPTH AND DESIRED HOLE SIZE, FIND 'FACTOR' ON TABLE 1.
2. USING 'FACTOR' AND SPAN, FIND MINIMUM DISTANCE ON TABLE 2. THE DISTANCE IS FROM ϕ OF SUPPORT TO ϕ OF HOLE.

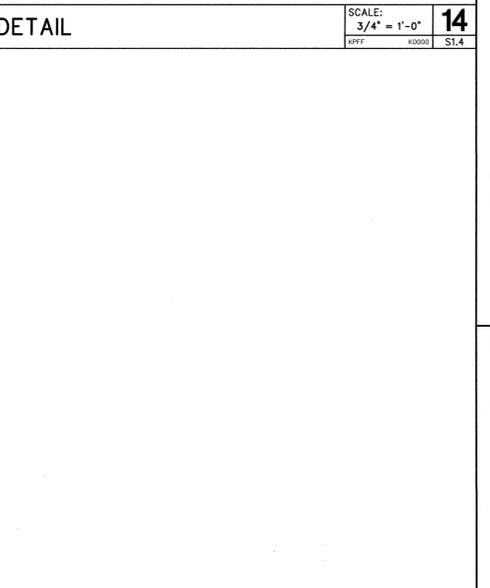
NOTE: THE TOP AND BOTTOM FLANGES ARE NEVER TO BE CUT.

ROUND HOLE	2"	3"	4"	5"	6"	7"	8"	9"	10"	11"
SQUARE HOLE	1/2	2/3	3/4	4/5	5/6	2/3	3/4	4/5	5/6	2/3

SPAN	HOLE FACTOR				
	A	B	C	D	E
14'-0"	1'-3"	2'-0"	2'-9"	3'-6"	4'-0"
15'-0"	1'-8"	2'-3"	3'-0"	3'-9"	4'-6"
16'-0"	1'-8"	2'-3"	3'-0"	4'-0"	4'-9"
17'-0"	1'-8"	2'-6"	3'-3"	4'-3"	5'-0"
18'-0"	1'-9"	2'-6"	3'-6"	4'-6"	5'-3"
19'-0"	1'-9"	2'-9"	3'-9"	4'-9"	5'-6"
20'-0"	2'-0"	3'-0"	4'-0"	5'-0"	6'-0"

* MINIMUM 1'-3" FROM ϕ OF SUPPORT
** MINIMUM 4" FROM ϕ OF SUPPORT

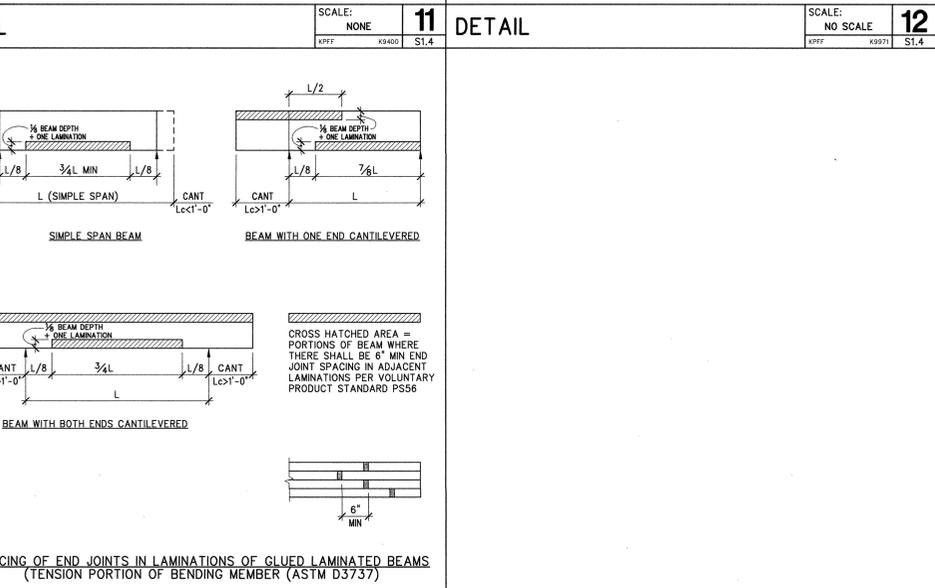
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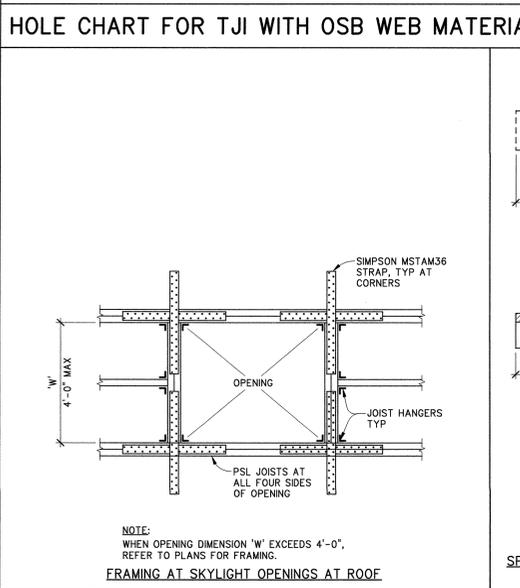
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SCALE: NONE
K997 K8000 S1.4



SCALE: NONE
K997 K8000 S1.4



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